

## Lessons at a Glance: Daily Supplies List (G5 Matter and Energy)

**Note:** any additional supporting documents (including model anchor charts and any printable or downloadable files) referenced in a lesson can be found in the “Supporting Files” section for that day’s lesson.

LESSON	MINI-LESSON	INQUIRY CIRCLES	SCIENCE INVESTIGATION
<b>Day 1:</b> <b>What Happens to Dead Organic Matter?</b>	<b>Teacher needs:</b> <ul style="list-style-type: none"> <li>• “Inquiry Toolbox” anchor chart</li> <li>• “Team Roles” anchor chart with job cards</li> </ul>	<b>Each team needs:</b> <ul style="list-style-type: none"> <li>• sticky notes</li> <li>• pencils</li> <li>• access to four recommended texts for initial exploration (see the Day 1 lesson for details)</li> </ul>	<b>Each team member needs:</b> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> </ul> <b>Each team needs:</b> <ul style="list-style-type: none"> <li>• access to videos/graphics</li> </ul> <b>Teacher needs:</b> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• “Animal Carcass” image</li> <li>• YouTube videos (see lesson for links)</li> </ul> <b>Setup:</b> see Day 1 lesson plan
<b>Day 2:</b> <b>Is There Life in Mud?</b>	<b>Teacher needs:</b> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Generating Questions anchor chart as a model</li> <li>• blank sample Inquiry Chart</li> </ul>	<b>Each team needs:</b> <ul style="list-style-type: none"> <li>• team Inquiry Chart on 11 x 17 Chart paper (created by the teacher)</li> <li>• index cards or sticky notes for generating questions</li> <li>• pencils</li> </ul> <b>Teacher needs:</b> <ul style="list-style-type: none"> <li>• blank sample Inquiry Chart</li> </ul>	<b>Each team member needs:</b> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <b>Each team needs:</b> <ul style="list-style-type: none"> <li>• 1 modified Winogradsky column</li> <li>• hand lenses</li> </ul> <b>Teacher needs:</b> <ul style="list-style-type: none"> <li>• premade Winogradsky columns (see “Before the Unit Begins” Section)</li> <li>• lamp with incandescent bulb</li> </ul> <b>Setup:</b> see Day 2 lesson plan

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<p><b>Day 3:</b> <b>What Is Soil?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• class Inquiry Chart</li> <li>• “Evaluating Claims and Evidence in Online Media” anchor chart as a model</li> <li>• <u>Fighting Food Waste</u> by Scholastic News (suggested)</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• preselected informational texts/media</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Food Waste Resources” spreadsheet for ideas</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> <li>• goggles</li> <li>• non-latex gloves</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 2 cups of soil</li> <li>• paper for covering work area</li> <li>• toothpicks or coffee stirrers</li> <li>• hand lenses</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• bucket or large bag of natural soil</li> <li>• shovel or hand trowel</li> <li>• measuring cup</li> <li>• large paper plates</li> <li>• paper for covering work areas (newspaper, craft paper, or paper bags, etc.)</li> <li>• toothpicks or coffee stirrers</li> <li>• hand lenses</li> <li>• goggles</li> <li>• non-latex gloves</li> <li>• soil video (link in lesson)</li> </ul> <p><b>Setup:</b> see Day 3 lesson plan</p>
<p><b>Day 4:</b> <b>Who Are the Soil Dwellers?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Intratextual Synthesis” anchor chart as a model</li> <li>• model Inquiry Chart</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• preselected informational texts/media</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Food Waste Resources” spreadsheet for ideas</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 Tracking Log</li> <li>• 1 plastic bag (for collecting game cards)</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Animal Carcass” image from Day 1</li> <li>• Soil Dwellers game</li> <li>• 1 copy of Tracking Log (includes game instructions)</li> </ul> <p><b>Setup:</b> see Day 4 lesson plan</p>

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<p><b>Day 5:</b> <b>How Is matter Cycled in an Ecosystem?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Identifying and Interpreting Diagrams” anchor chart as a model</li> <li>• model Inquiry Chart</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• preselected informational texts/ media</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Food Waste Resources” spreadsheet for ideas</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs</b></p> <ul style="list-style-type: none"> <li>• Soil Dwellers game cards (collected on Day 4)</li> <li>• Tracking Log</li> <li>• “Which Does Not Belong?” page</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• Soil Dwellers game cards</li> <li>• Soil Dwellers teacher key</li> <li>• “Which Does Not Belong?” page</li> <li>• “Which Does Not Belong?” teacher key</li> <li>• index cards</li> <li>• marker</li> </ul> <p><b>Setup:</b> see Day 5 lesson plan</p>
<p><b>Day 6:</b> <b>Can We Observe a Transfer of Energy?</b></p>	<p><b>No organized mini-lesson today.</b> Learners should have an additional 15 minutes to work in their inquiry circles. Teacher might also use this time to reteach a mini-lesson for learners who have been absent.</p>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• preselected informational texts/ media</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Food Waste Resources” spreadsheet for ideas</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 bag of cabbage indicator</li> <li>• 9-oz. plastic cups (two)</li> <li>• 2 spoons or coffee stirrers</li> <li>• measuring cup</li> <li>• 1 teaspoon measuring spoon</li> <li>• ½–1 cup warm water</li> <li>• 1 tsp. dry yeast</li> <li>• 1 tsp. sugar</li> <li>• black marker</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• 9-oz. plastic cups</li> <li>• spoons or coffee stirrers</li> <li>• warm water</li> <li>• packets of dry yeast</li> <li>• sugar</li> <li>• raw red or purple cabbage</li> <li>• small resealable plastic bags</li> <li>• teaspoon measuring spoons</li> </ul> <p><b>Setup:</b> see Day 6 lesson plan</p>

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<p><b>Day 7:</b> <b>What is a Winogradsky Column?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Exploring the Genre of Scientific Reports” anchor chart as a model</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• preselected informational texts/ media</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Food Waste Resources” spreadsheet for ideas</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> <li>• hand lens</li> </ul> <p><b>Each team needs</b></p> <ul style="list-style-type: none"> <li>• team’s modified Winogradsky column</li> <li>• “Sample Columns Table” page</li> <li>• access to Winogradsky column Video</li> <li>• 2–3 hand lenses</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• Winogradsky column video (in lesson)</li> <li>• “Sample Columns Table” page</li> <li>• hand lenses</li> </ul> <p><b>Setup:</b> see Day 7 lesson plan</p>
<p><b>Day 8:</b> <b>Matter and Energy in Decomposition</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Creating Diagrams” anchor chart as a model</li> <li>• model Inquiry Chart</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• sticky notes</li> <li>• paper for creating diagrams</li> <li>• drawing materials</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs</b></p> <ul style="list-style-type: none"> <li>• sticky notes</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• 1 sheet chart paper</li> <li>• marker</li> </ul> <p><b>Setup:</b> see Day 8 lesson plan</p>
<p><b>Day 9:</b> <b>Landfill or Compost?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• class Inquiry Chart</li> <li>• “Searching Online” anchor chart</li> <li>• model Inquiry Chart</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• sticky notes listing areas of confusion and/or new questions written yesterday</li> <li>• paper for creating diagrams, or previously started diagrams</li> <li>• drawing materials</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 “Garbage Disposal” chart</li> <li>• 1 set of Garbage Disposal Strips in a plastic bag</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Garbage Disposal” chart</li> <li>• “Garbage Disposal Strips” page</li> <li>• “Landfill vs. Composting” slideshow</li> <li>• “Landfill” image</li> <li>• small resealable plastic bags</li> </ul> <p><b>Setup:</b> see Day 9 lesson plan</p>

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<p><b>Day 10:</b> <b>What Is Vermicomposting?</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• “Synthesizing” anchor chart as a model</li> <li>• model Inquiry Chart</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 copy of the “Managing Waste” Page</li> <li>• access to the “Vermicomposting” and “Go Green with Worms” videos</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Vermicomposting” and “Go Green with Worms” videos (links in lesson)</li> <li>• “Worm Notes” page</li> <li>• “Managing Waste” page</li> </ul> <p><b>Setup:</b> see Day 10 lesson plan</p>
<p><b>Day 11:</b> <b>A Burning Question</b></p>	<p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper</li> <li>• marker(s)</li> <li>• Reference List Graphic Organizer</li> <li>• “Organizing a Reference List” anchor chart as a model</li> <li>• informational text about food waste to model the strategy (see “Food Waste Resources” spreadsheet for ideas)</li> </ul>	<p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• team Inquiry Chart</li> <li>• pencils</li> <li>• access to informational texts/ media previously used</li> <li>• copy of the Reference List Graphic Organizer</li> </ul>	<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 bag of newsclips</li> <li>• Managing Waste Chart</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Newsclips” page</li> <li>• “Backyard Burn” image</li> <li>• resealable plastic bags</li> </ul> <p><b>Setup:</b> see Day 11 lesson plan</p>
<p><b>Day 12:</b> <b>How Else Can We Dispose of Waste?</b></p>	<p><b>STARTING THE CULMINATING ACTIVITY</b></p> <p><b>Materials needed:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journals with all documents, notes, etc.</li> <li>• team Inquiry Charts</li> <li>• access to materials for handwriting or typing a report</li> <li>• access to materials for drawing diagrams or creating diagrams digitally</li> </ul>		<p><b>Each team member needs:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journal</li> <li>• pencil</li> <li>• colored pencils or crayons</li> </ul> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• 1 copy of the “Anaerobic Digestion infographic</li> <li>• Managing Waste Chart</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• “Anaerobic Digestion” infographic</li> <li>• “Apple” image</li> </ul> <p><b>Setup:</b> see Day 12 lesson plan</p>
<p><b>Day 13:</b> <b>Writing Scientific Reports</b></p>	<p><b>CULMINATING ACTIVITY</b></p> <p><b>Materials needed:</b></p> <ul style="list-style-type: none"> <li>• Investigation Journals with all documents, notes, etc.</li> <li>• team Inquiry Charts</li> <li>• access to materials for handwriting or typing a report</li> <li>• access to materials for drawing diagrams or creating diagrams digitally</li> </ul>		

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<p><b>Day 14:</b> Sharing Scientific Reports</p>	<p><b>CULMINATING PROJECT: PART 1</b></p> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• the report they have written (including the diagram they created)</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper or whiteboard for scribing learner ideas for the recommendation letter to be drafted tomorrow</li> </ul> <p><b>Setup:</b> see Day 14 lesson plan</p>		
<p><b>Day 15:</b> Recommending a Solution</p>	<p><b>CULMINATING PROJECT: PART 2</b></p> <p><b>Each team needs:</b></p> <ul style="list-style-type: none"> <li>• the report they have written (including the diagram they created)</li> </ul> <p><b>Teacher needs:</b></p> <ul style="list-style-type: none"> <li>• chart paper or whiteboard for scribing learner ideas for the recommendation letter to a school official</li> </ul> <p><b>Setup:</b> see Day 15 lesson plan</p>		